

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C. 20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

25 August 2000 (25.08.00)

International application No.

PCT/IB00/00274

Applicant's or agent's file reference

GS/BVI/21249

International filing date (day/month/year)

15 February 2000 (15.02.00)

Priority date (day/month/year)

15 February 1999 (15.02.99)

Applicant

PANG, Kian Tiong

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

13 July 2000 (13.07.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Juan Cruz

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

To:

SCHLICH, George, W.
Mathys & Squire
100 Gray's Inn Road
London WC1X 8AL
ROYAUME-UNI

Date of mailing (day/month/year) 17 April 2001 (17.04.01)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference GS/BVI/21249	
International application No. PCT/IB00/00274	International filing date (day/month/year) 15 February 2000 (15.02.00)

1. The following indications appeared on record concerning:

☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

Name and Address

State of Nationality

IL

State of Residence

IL

Telephone No.

Facsimile No.

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person ☐ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address

State of Nationality

IL

State of Residence

IL

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

Additional applicant/inventor for the US only.

4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned
☐ the International Searching Authority ☒ the elected Offices concerned
☒ the International Preliminary Examining Authority ☐ other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Maria Victoria CORTIELLO

Telephone No.: (41-22) 338.83.38

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference GS/BVI/21249	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/IB 00/ 00274	International filing date (day/month/year) 15/02/2000	(Earliest) Priority Date (day/month/year) 15/02/1999
Applicant AVIMO GROUP LIMITED et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

1



None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP 00/00274

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B3/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61B A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 46122 A (AVIMO EUROP LIMITED; AVIMO GROUP LIMITED (SG); PANG KIAN TIONG (SG) 22 October 1998 (1998-10-22) cited in the application	14-20
A	page 37, line 3 - line 24 page 5, line 12 - page 6, line 9 page 7, line 19 - line 24 page 29, line 12 - line 28 ---	21
X	WO 96 18415 A (UNIV JOHNS HOPKINS) 20 June 1996 (1996-06-20) page 19, line 16 - line 28	14, 17, 20
A	page 24, line 13 - line 26 page 26, line 10 - page 27, line 17 page 35, line 1 - line 16 --- -/--	15, 21

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

26 June 2000

Date of mailing of the international search report

03/07/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Knüpling, M

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/00274

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KLINGBELL U ET AL: "LASER-BASED FUNDUS CAMERA FOR INFRARED ANGIOGRAPHY" OPTICAL ENGINEERING,US,SOC. OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS. BELLINGHAM, vol. 34, no. 3, 1 March 1995 (1995-03-01), pages 737-745, XP000495218 ISSN: 0091-3286	14
A	section "2.2 Optical Systems" section "2.4 Digital imaging System" section "4.2 Clinical Application" page 744, right-hand column, line 4 - 17	17,20,21
X	--- US 5 279 298 A (FLOWER ROBERT W) 18 January 1994 (1994-01-18)	14,17,20
A	column 4, line 35 -column 5, line 10 column 6, line 3 - line 24 -----	21

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 00/00274

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9846122 A	22-10-1998	AU 7063698 A EP 0975258 A	11-11-1998 02-02-2000
WO 9618415 A	20-06-1996	US 5935942 A AU 4110396 A CA 2207624 A EP 0799055 A JP 10510807 T	10-08-1999 03-07-1996 20-06-1996 08-10-1997 20-10-1998
US 5279298 A	18-01-1994	AU 5618494 A EP 0669819 A JP 8503406 T WO 9412092 A	22-06-1994 06-09-1995 16-04-1996 09-06-1994

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

SCHLICH, GEORG W
MATHYS & SQUIRE
100 Gray's Inn Road
London WC1X 8AL
GRANDE BRETAGNE

RECEIVED
MATHYS & SQUIRE

07 MAR 2001

REPLY DATE

DIARY ENTERED

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing
(day/month/year)

05.03.2001

Applicant's or agent's file reference
GWS/21249

IMPORTANT NOTIFICATION

International application No.
PCT/IB00/00274

International filing date (day/month/year)
15/02/2000

Priority date (day/month/year)
15/02/1999

Applicant
AVIMO GROUP LIMITED et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer

Atienza Vivancos, B

Tel. +49 89 2399-7891



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference GWS/21249	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/IB00/00274	International filing date (<i>day/month/year</i>) 15/02/2000	Priority date (<i>day/month/year</i>) 15/02/1999	
International Patent Classification (IPC) or national classification and IPC A61B3/12			
Applicant AVIMO GROUP LIMITED et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 13/07/2000	Date of completion of this report 05.03.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Jestl, M Telephone No. +49 89 2399 2373



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IB00/00274

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).)*:

Description, pages:

1-25 as originally filed

Claims, No.:

1-12,13 (part) as originally filed

13 (part),14-19 as received on 15/02/2001 with letter of 15/02/2001

Drawings, sheets:

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IB00/00274

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.
- ☒ claims Nos. 1-13.

because:

- ☒ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
see separate sheet
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination report cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

- ☐ the written form has not been furnished or does not comply with the standard.
- ☐ the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IB00/00274

1. Statement

Novelty (N)	Yes:	Claims	14-20
	No:	Claims	
Inventive step (IS)	Yes:	Claims	14-20
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	14-20
	No:	Claims	

2. Citations and explanations **see separate sheet**

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB00/00274

Concerning Section III:

Claims 1-13 concern a surgical method (photocoagulation of blood vessels in the eye) which is subject matter according to Rule 67.1 (iv) PCT for which, pursuant to Article 34 (4)(a)(i) PCT, no International Preliminary Examination is carried out.

Concerning Section V:

1. The documents mentioned in the International Search Report are labelled as D1 - D4 in their order of appearance.
2. D1-D4 disclose apparatuses for examination and treatment of neovascularization comprising a light source for exciting a fluorescent dye used as a marker, a camera and an image recorder.
These documents do not, however, disclose trigger means (claim 14) or means for detecting the onset of the marker (claim 16) to detect whether the brightness of the marker is sufficient to start recording of the images and laser treatment, respectively.
Thus, the subject matter of independent claims 14 and 16 can be regarded as novel and inventive in the sense of Articles 33 (2) and (3) PCT.

Concerning Section VII:

The application does not meet the requirements of **Rule 6.3 (b) (i) and (ii) PCT** (two part form of the independent claim(s)).

The application does not meet the requirements of **Rule 6.2 (b) PCT** (reference numerals in all the claims).

images) showing the earliest appearance (of the first marker) is made semi-transparent and then is superimposed on the real-time image in which the second marker is introduced, the presence of the second marker in underlying locations (in real-time) indicating and confirming the suspected feeder vessels; and absence of the second marker in underlying locations indicating and confirming that the suspected feeders have been coagulated successfully.

10 14. Apparatus for examination of neovascularization in an eye of a patient, comprising:-

a light source for exciting a dye introduced into the circulation of the patient;

15 an image generator for generating an image of a region of the eye under examination;

an image recorder for recording a plurality of images of the region; and

20 trigger means associated with the image recorder and sensitive to an increase in the brightness of the marker in the region for triggering the image recorder to start recording when the brightness rises above a predetermined level.

25 15. Apparatus according to Claim 14, wherein the image recorder can record images at a rate of at least 30 per second.

30 16. Ophthalmological apparatus for examining and treating the eye, whereby neovascularization can be diagnosed by introducing a marker into the circulatory system and detecting the marker in the foveal-macular region of the eye; the apparatus comprising:

a lens system;

35 a laser source, an illumination source and an image intensifier arranged on respective optical paths of the lens system;

a high speed CCD camera coupled to the image

intensifier and to a video image generating system, said video imaging system comprising means for capturing and storing frames of image information and means for detecting the onset of the marker into a
5 feeder vessel to the choroidal neo-vascular membrane (CNVM),

so that the laser source can be used to photocoagulate the feeder and thereby treat the neovascularization.

10 17. Apparatus according to claim 16, wherein the lens system includes confocal imaging paths.

18. Apparatus according to claim 16 or 17 including means responsive to an increase in brightness in an image
15 generated in the frames so as to signal the arrival of the marker in the foveal-macular region of the eye so as to trigger the image generating system to begin recording frames at a frame rate fast enough to enable the onset of the market in the feeder vessel to be determined, as well
20 as subsequent filling of the feeder vessels, before the marker fills the visible retinal vasculature.

19. Apparatus according to claim 16-18, including processing means programmed to detect the location of a
25 second marker so as to determine the position of blood vessel walls so as to build up a map or network of the vasculature including feeder vessels, and to show an image or images of the location of the onset of the first marker against the images of the vasculature, to facilitate
30 determining the location of the feeder vessel.